

Genomics Market Forecasts to 2032 – Global Analysis By Product (Instruments, Consumables and Software & Services), Function, Delivery Model, Technology, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Genomics Market is accounted for \$44.3 billion in 2025 and is expected to reach \$129.1 billion by 2032 growing at a CAGR of 16.5% during the forecast period. Genomics is the branch of molecular biology focused on the structure, function, evolution, mapping, and editing of genomes—the complete set of DNA within an organism. It involves analyzing genes and their interactions to understand biological processes, disease mechanisms, and genetic variation. Genomics plays a vital role in personalized medicine, agriculture, biotechnology, and environmental science. Techniques such as sequencing, bioinformatics, and gene editing enable researchers to identify genetic markers, develop targeted therapies, and improve crop traits. By decoding the genetic blueprint of life, genomics drives innovation across healthcare and science, offering insights into heredity, health risks, and evolutionary biology.

Market Dynamics:

Driver:

Rising Demand for Personalized Medicine

The growing emphasis on personalized medicine is a major driver of the genomics market. By tailoring treatments to individual genetic profiles, healthcare providers can improve outcomes and reduce adverse reactions. Genomics enables precise diagnosis, targeted therapies, and predictive risk assessments, especially in oncology, cardiology,

and rare diseases. As patients and providers seek more customized care, demand for genomic testing and data analytics continues to rise, supported by advances in sequencing technologies and integration with electronic health records.

Restraint:

High Cost of Genomic Equipment and Services

Despite its transformative potential, the genomics market faces significant cost-related restraints. High expenses for sequencing platforms, reagents, and bioinformatics tools limit accessibility, particularly in low-resource settings. Additionally, the need for skilled personnel and infrastructure adds to operational costs. These financial barriers hinder widespread adoption in clinical and agricultural applications. While prices are gradually declining, affordability remains a challenge for small labs and emerging markets, necessitating scalable solutions and public-private partnerships to expand genomic capabilities globally.

Opportunity:

Advancements in Sequencing Technologies

Technological innovation in sequencing methods presents a major opportunity for the market. Next-generation sequencing (NGS) and emerging platforms offer faster, more accurate, and cost-effective genome analysis. These advancements enable broader applications in diagnostics, drug development, and population genomics. As sequencing becomes more accessible, researchers and clinicians can explore complex genetic interactions and rare variants with greater precision. Continued progress in automation and data interpretation will further enhance genomics' role in personalized medicine and global health initiatives.

Threat:

Data Privacy and Ethical Concerns

Data privacy and ethical challenges pose a significant threat to the market. Handling sensitive genetic information raises concerns about consent, data security, and misuse. Patients may be reluctant to share genomic data without clear safeguards, especially in direct-to-consumer testing. Regulatory frameworks vary across regions, complicating compliance and cross-border research. Ethical dilemmas around gene editing,

discrimination, and ownership of genetic data further intensify scrutiny. Addressing these issues requires transparent policies, robust cybersecurity, and ethical oversight to maintain public trust.

Covid-19 Impact:

The COVID-19 pandemic accelerated genomics research and applications, particularly in viral sequencing and vaccine development. Genomic surveillance played a critical role in tracking mutations and guiding public health responses. The crisis also highlighted the importance of rapid diagnostics and personalized treatment strategies. While initial disruptions affected supply chains and research timelines, long-term investment in genomics infrastructure surged. The pandemic underscored the value of genomic data in managing infectious diseases and reinforced its integration into routine healthcare and global preparedness efforts.

The microarrays segment is expected to be the largest during the forecast period

The microarrays segment is expected to account for the largest market share during the forecast period, due to its widespread use in gene expression profiling, genotyping, and biomarker discovery. Microarrays offer high-throughput analysis and cost-effective solutions for large-scale studies. Their ability to simultaneously examine thousands of genes makes them valuable in research, diagnostics, and pharmacogenomics. As demand grows for personalized medicine and disease risk assessment, microarrays remain a preferred tool for academic institutions, clinical laboratories, and biotech companies seeking reliable genomic insights.

The forensic genomics segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the forensic genomics segment is predicted to witness the highest growth rate, due to advances in DNA sequencing and bioinformatics are revolutionizing criminal investigations, paternity testing, and disaster victim identification. Genomic tools enable precise analysis of degraded or limited samples, improving accuracy and resolution in forensic cases. Growing demand for rapid, portable testing solutions and integration with national databases further drives adoption. As legal systems embrace genomic evidence, forensic genomics is poised for rapid expansion across law enforcement and judicial applications.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, due to rapid population growth, increasing healthcare investments, and rising awareness of genetic testing fuel regional demand. Countries like China, India, and Japan are advancing genomics research through government initiatives and private sector collaboration. Expanding biotech hubs, favorable regulatory environments, and growing interest in personalized medicine contribute to market dominance. With a strong base of academic institutions and emerging startups, Asia Pacific leads in genomic innovation and accessibility.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to robust research infrastructure, high healthcare spending, and early adoption of advanced technologies. The region's leadership in precision medicine and bioinformatics supports rapid market growth. Government funding, academic excellence and strong industry presence foster innovation across diagnostics, therapeutics, and agriculture. Regulatory support and public awareness further enhance adoption. As genomics becomes integral to healthcare and life sciences, North America continues to set the pace for global expansion.

Key players in the market

Some of the key players in Genomics Market include Illumina, Eurofins Scientific, Thermo Fisher Scientific, GenScript Biotech, BGI Genomics, Intellia Therapeutics, Agilent Technologies, CRISPR Therapeutics, Roche, Oxford Nanopore Technologies, Bio-Rad Laboratories, Pacific Biosciences, QIAGEN, 10x Genomics, and Natera.

Key Developments:

In July 2025, Thermo Fisher Scientific has expanded its strategic partnership with Sanofi by acquiring Sanofi's state-of-the-art sterile fill-finish and packaging facility in Ridgefield, New Jersey. This acquisition enhances Thermo Fisher's U.S. manufacturing capabilities, enabling the production of critical medicines for Sanofi and meeting the growing demand from pharmaceutical and biotech customers.

In May 2025, RoosterBio and Thermo Fisher Scientific have announced collaboration aimed at advancing the development and manufacturing of cell and exosome therapies for degenerative diseases. This partnership combines RoosterBio's expertise in human

mesenchymal stem/stromal cells (hMSCs) and exosome technologies with Thermo Fisher's global contract manufacturing capabilities.

Products Covered:

Instruments

Consumables

Software & Services

Functions Covered:

Genome Sequencing

Epigenomic Analysis

Gene Expression Profiling

Genotyping

Delivery Models Covered:

On-Premise

Web-Based

Cloud-Based

Technologies Covered:

Sequencing

PCR

Microarrays

CRISPR

Epigenomics

Applications Covered:

Diagnostics

Drug Discovery & Development

Forensic Genomics

Precision Medicine

Agriculture & Animal Research

Other Applications

End Users Covered:

Hospitals & Clinics

Diagnostic Laboratories

Research & Academic Institutions

Pharmaceutical & Biotechnology Companies

Contract Research Organizations (CROs)

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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